

**IN THE DRAWINGS:**

Please substitute the enclosed Figure 1 for the previously filed Figure 1. The attached revised sheets and annotated sheets of drawings show changes made to Fig. 1. In Fig. 1, the reference numeral "36" between "20" and "22" has been corrected to now read "34."

## **REMARKS**

Applicant has reviewed the above-referenced Office Action, carefully considered the references, and carefully weighed the Examiner's comments. In view thereof, Applicant submits the present amendment. Applicant contends that by the present amendment, all bases of the Examiner's rejections set forth in the Office Action have been traversed and overcome. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejections in view of the present amendments as well as the remarks set forth below.

Applicant respectfully submits that the present amendment is fully supported by the original disclosure, including the drawings. Applicant also respectfully submits that no new matter is introduced into the application by the present amendment, since the entire subject matter thereof was expressly or inherently disclosed in the claims, specification, and drawings.

## **AMENDMENTS PRESENTED**

### In the Claims:

Claim 1 has been amended to correct a minor editorial and a minor punctuation error by adding a semi-colon at the end of line 9.

New claims 18-31 have been added to re-introduce the subject matter of the claims previously canceled by Preliminary Amendment-C.

New claims 32-35 also have been added.

### In the Drawings:

Fig. 1 has been amended to reflect a minor typographical correction made to the reference number "36" (between "20" and "22") to "34." In the Office Action, the Examiner objected to Fig. 1 in the drawings. Applicant respectfully suggests that the Examiner's objection to Fig. 1 has been overcome by this amendment.

### **Claim Rejections – 35 U.S.C. § 103**

In item 5 of the Office Action, the Examiner rejected claims 1, 5 and 8 under 35 U.S.C. §103(a) as unpatentable over Stimmel et al. (WO 00/71292; hereinafter, Stimmel) in view of Tsuchiya et al. (JP 62-238099; hereinafter Tsuchiya). In rejecting the claims, the Examiner asserted that in his view, Stimmel discloses all the aspects of the claimed invention except an engaging member which is swingable, extendable, and retractable through a resilient member, and which absorbs shocks. The Examiner asserted that Tsuchiya discloses such an engaging member collectively in the form of components 39, 40, and an associated resilient member (the driving motor 38). The Examiner concluded that in his view, it would have been obvious to modify the jig of Stimmel with the adjustable member of Tsuchiya to arrive at the claimed invention.

### ***Applicant's Response***

Applicant respectfully disagrees with the Examiner's assertions and claim rejections under §103(a) and traverses such rejections, because the Examiner's proposed modification of the device of Stimmel relative to a select feature of the holder of Tsuchiya is improperly based on a suggestion coming entirely from the Examiner. Applicant respectfully requests reconsideration and withdrawal of the above claim rejections, because the Examiner is guided by impermissible hindsight of Applicant's disclosure, rather than from any teaching, suggestion or motivation of the references themselves or from any other appropriate source.

Applicant notes that in the positioning device of Stimmel, a workpiece is supported by a holder 6, which is supported/engaged at one end by a supporting robot 2, and is supported at an opposite end by a stand 9 (with a base 10). A spherical member 13 on the opposite ("second") end of the holder 6 comes in contact with a prism- or cone-shaped centering admission member 11 on the stand 9. The spherical member 13 may be moved – rather, rubbed – in multiple directions while

centered at the prism- or cone-shaped member 11. The robot 2 may also move the holder in multiple directions.

Similarly, Applicant notes that in the holder of Tsuchiya, a workpiece is initially supported at one end on a receiving base 21 and is operatively connected (on the same one end) to components 23, 26 associated with the base 21. A posture-changing robot 30 fixedly engages the workpiece at an opposite end via a chuck 40, which engages a supporting rod W3 on (the opposite end of) the workpiece. The posture of the workpiece is changed through a swingable arm 39 supporting the chuck 40 and driving motors 38, 42 of the robot 30, so that the workpiece may be properly, stably positioned relative to welding robots 2; the robots 2 are positioned adjacent to the robot 30, for welding of the workpiece.

It will therefore be seen that both the positioning device of Stimmel and the holder of Tsuchiya include one automated (robot) mechanism for accurately positioning a workpiece at one end and another mechanism which merely supports the workpiece at an opposite end. Both engage a workpiece at one end of the workpiece – in Stimmel, through a multi-axis manipulator 2 and in Tsuchiya, through a posture changing robot 30. However, neither manipulates the opposite end of the workpiece.

Contrary to the Examiner's assertion on page 4 of the Office Action, an "engaging member assembly (11, 12, 13)" does not manipulate or engage the opposite end of a workpiece (holder). The prism- or cone-shaped member 11 *merely provides a centering support* for the opposite end of the workpiece (holder) that is not engaged by the automated (robot) mechanism. The member 11 is *thus a mere contact point* as evidenced by an attached sensor arrangement 12, which measures "contact" values between the spherical member 13 and the member 11. (See Stimmel, abstract; page. 3, last 2 lines through page 4, first 3 lines.) Applicant agrees with the Examiner's assertion

that Stimmel does “not specifically disclose that the [member 11] is swingable and extendable.” Applicant, however, respectfully disagrees with the Examiner’s assertion that the member 11 is an “engaging member.” Clearly, the member 11 is not an engaging but merely a supporting member.

Also, contrary to the Examiner’s assertion on page 5 of the Office Action, it would not have been obvious to a person of ordinary skill in the art to substitute the “engaging member assembly (11, 12, 13)” of Stimmel with the swingable and extendable arm 39 (with the chuck 40) of Tsuchiya. As the Examiner’s asserted, “the *robot* 30 [of Tsuchiya] includes a holding arm 39 . . . in combination with . . . a driving *motor* 38.” (See Office Action; page 4, bottom.) The swingable and extendable arm 39 is an integral and inseparable part of the robot 30, an automated (robot) mechanism. Therefore, adding such robot of Tsuchiya into the device of Stimmel would result in a complicated system in which each end of a workpiece is separately engaged by a different automated (robot) mechanism.

Given the actual disclosures of Stimmel and Tsuchiya, a person skilled in the art would not consider the Examiner’s proposed modification to be obvious, because the references provide no motivation for the proposed modification. Rather, the references actually teach away from the proposed modification. Again, the device of Stimmel and the holder of Tsuchiya as disclosed function in a similar manner as discussed above, and each requires only one automated mechanism for positioning a workpiece. Contrary to the reference disclosures, the Examiner proposed to substitute the supporting, but non-manipulating, mechanism of the device of Stimmel (i.e., the centering support 11 provided on the stand 9 with the base 10) with the manipulating mechanism of Tsuchiya (i.e., the posture changing robot 30), whereby the modified system would have two automated mechanisms for positioning of a workpiece.

A person skilled in the art would not consider the proposed modification to be obvious.

There is no need for the modification given that Stimmel's device already includes the multi-axis manipulator 2 for manipulating a workpiece. Hence, the proposed modification simply amounts to an unnecessary complication of Stimmel's device. This would unduly complicate and significantly increase the cost of the system. The proposed modification also violates and destroys an important aspect of Stimmel's actual patented device: the centering support 11, which supports the spherical end 13 of the workpiece holder 6, while permitting multi-axis movement of the holder 6. Moreover, the references actually teach away from the proposed modification in that both references show that it is sufficient and desirable to have only one automated mechanism for positioning of a workpiece.

Additionally, the Examiner's rejection is traversed because Tsuchiya does not disclose or suggest an engaging member, which is retractable relative to a (second) end of a positioning jig through a resilient member in order to absorb shocks that are produced when the end of the jig engages with the engaging member, as defined in claim 8.

The Examiner refers to the motor 38 of Tsuchiya as purportedly meeting the claimed limitation, but this is not a reasonable interpretation of the respective teachings of the present specification and Tsuchiya. As disclosed in relation to an embodiment of the present invention, the resilient member is a spring 166 operatively associated with the extendable rod 160. Throughout the application, a spring is consistently recognized as a resilient member. On the other hand, Tsuchiya never discloses that the motor 38 functions as a resilient member to absorb shocks applied to the chuck 40. For instance, given the nature of a chuck, it would rotatably contract to grip a workpiece, but it would not be driven into the workpiece with sufficient force to create a shock. Moreover, a driving motor is not conventionally recognized as a "resilient member."

Therefore, Applicant respectfully traverses the rejection of record, and requests that the Examiner's rejections be reconsidered and withdrawn, because the Examiner has not established

prima facie obviousness of the claimed subject matter under 35 U.S.C. §103(a).

### **Other Matters**

Applicant respectfully submits that in the corresponding Japanese Patent Application Number 2003-082134, claims corresponding to the pending claims 1, 5 and 8 of the present application have been allowed by the Japanese Patent Office (JPO), as outlined in a separately filed Request for Participating in the Patent Prosecution Highway (PPH) Pilot Program between the JPO and the USPTO. Applicant respectfully suggests that claims 1, 5 and 8 of the present application are also in condition for allowance by the USPTO.

Applicant also respectfully submits that the new claims are fully supported throughout the original disclosure and specification. Applicant respectfully submits that no new matter is introduced by the present amendment, as all of the subject matter thereof was expressly or inherently disclosed by the original application, including the specification, claims and drawings.

### **Conclusion**

Based on all of the foregoing, Applicant respectfully submits that all of the rejections set forth in the Office Action are overcome, and that as presently amended, all of the claims are believed to be allowable over all of the references of record, whether considered singly or in combination. Applicant requests reconsideration and withdrawal of the rejections of record, and allowance of the claims.

If the Examiner is not fully convinced of all of the claims now in the application, Applicant respectfully requests that the Examiner telephonically contact Applicant's undersigned representative to expeditiously resolve prosecution of the application.

Favorable reconsideration is respectfully requested.

Respectfully submitted,



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